AMENDMENTS TO THE CLAIMS

1. – 67. (Cancelled)

68. (Original) A method of determining temperature of an imager chip, said method comprising:

storing a fabrication process dependent value for an imager chip;

storing at least one chip dependent value representing a measured pixel dark current reference value and a reference temperature at which said chip dependent dark current reference value was measured;

measuring a dark current value of a pixel on said chip; and

determining a chip temperature representation based on said measured dark current value and stored values.

69. (Original) A method of claim 68 further comprising storing said fabrication process dependent value and said chip dependent value on said chip.

70. (Original) A method of determining and using temperature values of an imager chip, said method comprising:

storing a fabrication process dependent value for an imager chip;

storing at least one chip dependent value representing a measured pixel dark current reference value and a reference temperature at which said chip dependent dark current reference value was measured;

measuring a dark current value of a pixel on said chip;

determining a chip temperature representation based on said measured dark current value and stored values; and

correcting at least one temperature dependent parameter of said imager based on a respective said temperature representation.

71. (Original) A method of claim 70 wherein said parameter is a current.

72. (Original) A method of claim 70 wherein said parameter is an impedance.

73. (Original) A method of claim 70 wherein said parameter is a capacitance.

74. (Original) A method of claim 70 wherein said parameter is a voltage.

75. (Original) A method of claim 70 wherein said parameter is a resistance.

76. (Original) A method of determining temperature of an imager device, said method comprising:

acquiring at least one dark current signal from at least one pixel in a pixel array; and

determining a temperature value using said acquired dark current signal together with a fabrication process value, and at least one other value representing a reference dark current signal of a pixel of said pixel array taken at a reference temperature.

77. (Original) A method as in claim 76 wherein said at least one other value is an imager chip dependent value.

78. (Original) A method as in claim 76 further comprising storing said dark current signal and said reference temperature at said imager device.

79. (Original) A method as in claim 76 wherein said chip dependent value is stored at said imager device.

80. (Original) A method of claim 76 further comprising correcting at least one temperature dependent parameter of said imager device using said temperature value.

81. (Original) A method of claim 80 wherein said parameter is a current.

82. (Original) A method of claim 80 wherein said parameter is a resistance.

83. (Original) A method of claim 80 wherein said parameter is a voltage.

84. (Original) A method of claim 81 wherein said parameter is an impedance.

85. (Original) A method of claim 80 wherein said parameter is a capacitance.

86. (Original) A method of determining temperature of an imager chip, said method comprising:

acquiring at least one dark current signal at a plurality of locations of a pixel array; and

determining an associated temperature value for each of said locations using a respective said at least one dark current signal.

87. (Original) A method as in claim 86 further comprising respectively adjusting each of a plurality of temperature dependent parameters of said imager based on an associated said temperature value.

88. (Original) A method as in claim 87 wherein said parameters comprise a current.

89. (Original) A method as in claim 87 wherein said parameters comprise an impedance.

90. (Original) A method as in claim 87 wherein said parameters comprise a resistance.

91. (Original) A method as in claim 87 wherein said parameters comprise a voltage.

92. (Original) A method as in claim 87 wherein said parameters comprise a capacitance.

93. (Original) A method of determining an imager chip temperature comprising:

sampling a dark pixel signal with a first integration time;

sampling a second dark pixel signal with a second integration time;

providing a calibrated dark pixel signal using said first and second sampled dark pixel signals; and

calculating a chip temperature using the calibrated dark pixel signal and a fabrication process dependent value related to dark current and temperature, and a chip dependent value related to dark current and temperature.

94. (Original) A method as in claim 93 wherein said fabrication process dependent value is related to temperature dependent dark current behavior of a plurality of imager devices manufactured using the same manufacturing process.

95. (Original) A method of correcting a temperature dependant parameter for an imager chip comprising:

determining at least one correction value for an associated at least one temperature dependent parameter of an imager based on a temperature value, said temperature value being determined based upon a pixel value measured during said chip operation, a stored fabrication process dependent value related to dark current and temperature and a chip dependent value related to dark current and temperature; and

using at least one said value to adjust a respective temperature dependant parameter of at least one portion of said imager.

96. (Original) A method of claim 95 wherein using said value to adjust an associated temperature dependent parameter of said imager comprises adjusting a first current signal to produce a second current signal.

97. (Original) A method of claim 95 wherein said parameter comprises a capacitance.

98. (Original) A method as in claim 95 wherein said parameter comprises a current.

99. (Original) A method of claim 95 wherein said parameter comprises a voltage.

100. (Original) A method of claim 95 wherein said parameter comprises a resistance.

101. (Original) A method of claim 95 wherein said parameter comprises an inductance.

102. (Original) A method of claim 95 wherein said fabrication process dependent value is related to temperature dependent dark current behavior of a plurality of imager devices manufactured using the same manufacturing process.

103. (Original) A method of determining an imager chip temperature comprising:

sampling a first and second dark pixel signals from each of a plurality of dark pixel clusters, each said cluster sampling comprising:

sampling a first dark pixel signal with a first integration time; and

sampling a second dark pixel signal with a second integration time;

calculating a calibrated dark pixel signal for each dark pixel cluster using said first and second dark pixel signal of each cluster; and

calculating a separate chip temperature for each said dark pixel cluster using a said calibrated dark pixel signal for each said cluster and a fabrication process dependent value related to dark current and temperature, and a chip dependent value.

104. (Original) A method of correcting a current source on an imager comprising:

determining a plurality of unique current correction signals, wherein each unique current correction signal is associated with one or more circuit components of an imager chip, wherein said determining of a plurality of unique current correction signals is based on a temperature value associated with said components;

multiplying each of said unique current correction signal with a current signal to produce a corrected current signal for each component; and

supplying each of said corrected current signals to each associated circuit component.

105. (Original) A method as in claim 104 further comprising:

determining a master current correction signal based on a temperature of said imager chip; and

controlling a master current with said master current correction signal.

106. (Original) A method of correcting temperature dependant signals on an imager comprising:

determining a plurality of correction signals, wherein a unique correction signal is associated with one or more circuit components of an imager chip, wherein said determining of a plurality of correction signals are based on a temperature value associated with said components determined based upon a dark pixel signal, a fabrication process dependent value related to dark current and temperature, and a chip dependent value; and

correcting at least one temperature dependent property on said imager based on an associated said correction signal.

107. (Original) A method as in claim 106 further comprising:

determining a master current correction signal based on a said temperature of said imager chip; and

controlling a master current with said master current correction signal.

108. (Original) A method as in claim 106 wherein said correction signals comprises a voltage correction signal

109. (Original) A method of claim 106 wherein said correction signals comprises a capacitance correction signal.

110. (Original) A method of claim 106 wherein said correction signals comprises an inductance correction signal.

111. (Original) A method of claim 106 wherein said correction signals comprises a resistance correction signal.

112. (Original) A method of claim 106 wherein said correction signals comprises a current correction signal.